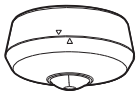
Schneider Electric

USER MANUAL

Flush/Surface Mount Single-Load 360° PIR Motion Sensor

CAT. NO.
SAE-UE-MS-CSAWE

ELECTRONIC ACCESSORIES



TECHNICAL SPECIFICATIONS	
Rated Voltage	230V~±10% 50/60Hz
Load	Load(⏚) for Lighting: μ Incandescent Lamp: max. 2000W AC Halogen Lamp : max. 1000W LV Halogen Lamp : max. 1000VA Fluorescent Lamp : max. 900VA / 100μF
Auto off time adjustment	From 5secs to 20mins, Test &⎍
Lux Adjustment	From 10Lux to 2000Lux
Detection Range	360°circular, up to Φ7m at height of 2.5m
Operating Temperature	0°C to +45°C (Indoor usage) -20°C to +45°C (Outdoor usage)
Environmental Protection	Class II IP44 (Surface mount with junction box) IP40 (Flush mount with spring clip or European standard junction box)

All procedures indicated in this manual must be carried out by a professional installer

1 PACKAGE CONTENTS

Pattern			
Item	Detector	User Manual	Protection Cap
Quantity	1	1	1

Pattern			
Item	Non-dropping screw Φ3 x 18mm	Wood Screw Φ4 x 25.4mm	Junction Box
Quantity	4	2	1

2 PRODUCT DESCRIPTION

2.1 Features

SAE-UE-MS-CSAWE is a ceiling flush mount or surface mount both applicable for indoor or outdoor application which is ideal for use in office, conference room, hotel, home, etc. With its knobs, the time and Lux value can be adjusted as user desired to match different requirements for switching light on and off.

- High performance relay for connecting all types of lights, e.g. Compensated / uncompensated fluorescent lamp, halogen lamp, incandescent lamp etc.
- Flexible and wide mounting methods: Flush mount with spring clip or European standard junction box, surface mount with junction box is also available.
- High sensitivity is provided by a unique lens with "no dead spot" zones in its 360° high intensity of detection.
- A built-in red LED is used as an indicator for easy test operation and different operation modes clear identification.
- Manually switch on the loads by wire connected to an external N.C. type push button switch when the ambient light level exceeds the pre-set Lux value.

2.2 Dimension

- **SAE-UE-MS-CSAWE :** Φ111.5 x 59mm (See FIG.1-A)

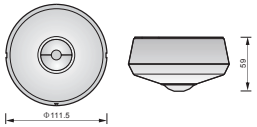


FIG.1-A

- **Junction Box :** Φ111.5 x 35mm (See FIG.1-B)

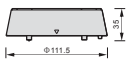


FIG.1-B

- **Detector unit:** Φ111.5 x 70mm (See FIG.1-C)

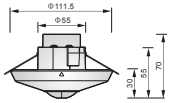


FIG.1-C

3 INSTALLATION AND WIRING

⚠ Please disconnect power completely and read the entire instruction manual carefully before installation.

3.1 Proper Location

3.1.1 It is recommended to install at the height of 2.5m to gain the optimal detection pattern. The detection range can reach up to 7m diameter with a 360° detection angle (See FIG.2).

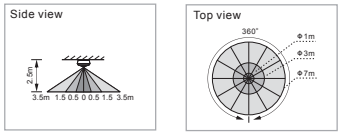


FIG.2

3.1.2 Pay attention to the walking direction during the test. SAE-UE-MS-CSAWE is more sensitive to movement across the detector and less sensitive to movement directly towards to detector which will reduce the detection coverage (See FIG.3).

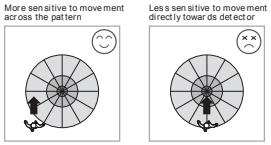


FIG.3

3.1.3 Helpful tips for installation

Since the detector is responding to temperature change, please avoid the following conditions (See FIG.4-A & FIG.4-B).

- The detector aiming toward the objects which may be swayed in the wind, such as curtain, tall plants, miniature garden, etc.
- The detector aiming toward the objects whose surface are highly reflective, such as mirror, monitor, etc.
- Mounting the detector near heat sources, such as heating vents, air conditioning, vents as dryers, lights, etc.

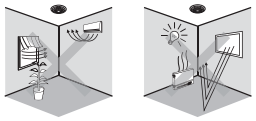


FIG.4-A

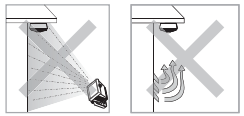


FIG.4-B

3.2 Wiring

3.2.1 Push button function

The load can be manually switched ON by using an external push button switch (N.C. ≥10A type, See FIG.5 - FIG.6). When the load is off, it can be switched on by a short press (≤1sec) on push button switch and Lux is disabled. After the load is switched on manually, the load can be automatically switched off if no movement is detected and the delay time has expired.

3.2.2 SAE-UE-MS-CSAWE for standard application (See FIG.5).

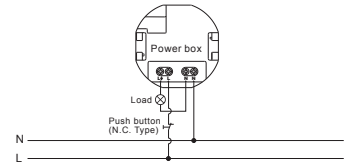


FIG.5

3.2.3 One load is controlled by two detectors to enlarge detection area (See FIG.6).

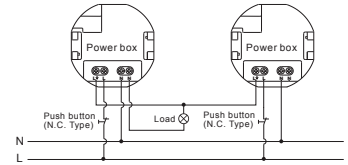


FIG.6

3.2.4 Staircase timer switch control (Timer should be set to ⎍, See FIG.7).

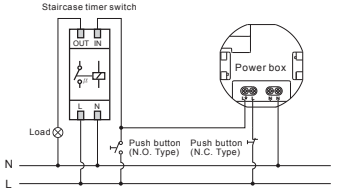


FIG.7

3.3 Installation Procedure

3.3.1 Flush mount

NOTE

When detector is flush mounted with spring clip, protection cap of terminals must be used.

To install detector, please drill a hole with diameter of 65mm on ceiling board and keep the power cable outside. Please strip off 6 - 8mm of cable sheathing for wiring (See FIG.8).

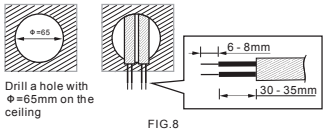


FIG.8

Refer to wiring diagrams for correct cables connection (FIG.5 - FIG.7), then put protection cap back and screw it tightly (See FIG.9).

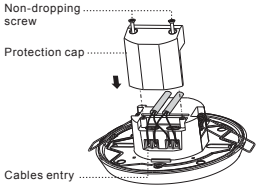


FIG.9

- Knock-outs on protection cap of terminals are for cables entry. Please refer to following illustration for application.
- No knock-outs are used: Φ2mm (See FIG.10-A);

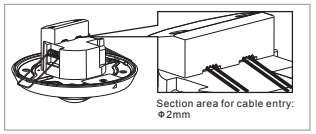


FIG.10-A

- Small knock-outs are used: Φ8mm (See FIG.10-B);

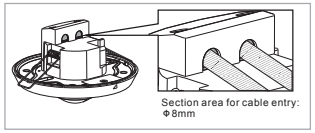


FIG.10-B

- Big knock-outs are used: Φ12.5mm (See FIG.10-C);

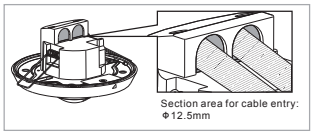


FIG.10-C

Close up detector's two spring clips and insert detector into the drilled hole on ceiling (See FIG.11).

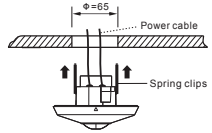


FIG.11

Restore power supply.

3.3.2 Flush mount with European standard junction box

NOTE

The protection cap of terminals and spring clip are not needed to be used when the detector is flush mounted with European standard junction box.

Take off detector's two spring clips with tool before installation.

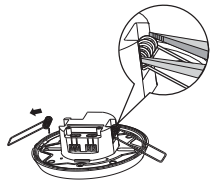


FIG.12

Pull out cables from European standard junction box (See FIG.13), then strip off 6 - 8mm of cable sheathing for wiring (See FIG.5 - FIG.7).

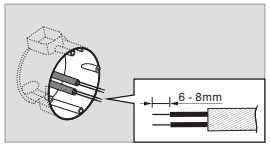


FIG.13

Turn the decorative frame of detector anti-clockwise with proper strength, then insert two screws into the knock-outs on top cover and screw the detector on European standard junction box (See FIG.14).

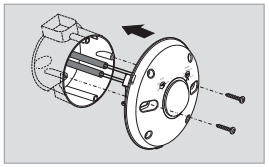


FIG.14

Cover up the decorative frame and restore power supply.

3.3.3 Surface mount

NOTE

The protection cap of terminals and spring clip are not needed to be used when the detector is surface mounted.

There are 7 pairs of knock-outs with various distances from 41mm to 85mm on the bottom cover of the combined junction box off step these pairs of knock-outs can be selected for different mounting applications (See FIG.15-A). Select the two same figures (41,53,60,,,) on both sides (A and B).

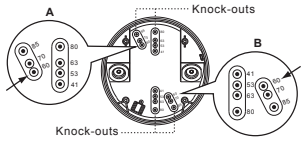


FIG.15-A

NO.	A	B	The distance between A and B
1	41	41	41mm
2	53	53	53mm
3	60	60	60mm
4	63	63	63mm
5	70	70	70mm
6	80	80	80mm
7	85	85	85mm

FIG.15-B

To feed cables through the side of junction box, please use the cutting pliers to break the cable entry knock-outs on the side of junction box, then insert cables into junction box and feed through it. Strip off 6 - 8mm of cable sheathing for wiring (See FIG.16).

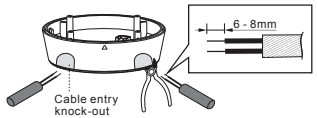


FIG.16

Choose proper knock-outs to fix the junction box on the surface of ceiling board with two wood screws attached with rubber washer (See FIG.17).

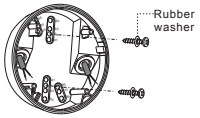


FIG.17

Take off detector's two spring clips (See FIG.12), turn he decorative frame of detector anti-clockwise with proper strength, then insert the 4 non-dropping screw to the corresponding screw holes on detector's front cover. Afterwards, those 4 screws will not drop off to provide conveniences to the subsequent installations (See FIG.18).

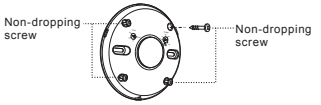


FIG.18

Refer to wiring diagrams for correct wiring connection See FIG.5 - FIG.7).
There is a "△" symbol on the side of the surface of junction box, the housing of SAE-UE-MS-CSAWE and the decorative frame respectively for position verified convenience. Keep the "△" symbol on the junction box and detector's front cover in line to assemble them with the attached 4 non-dropping screws, then cover up the detector's decorative frame (See FIG.19) and turn it to be tight.

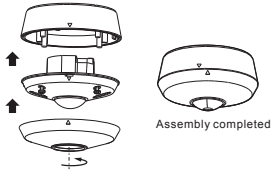


FIG.19

4 OPERATION

4.1 Lux, Time knob

Follow the marked values to adjust Lux & Time knobs according to user's requirement (See FIG.20).

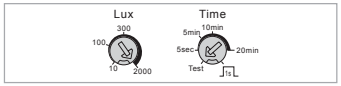


FIG. 20

4.1.1 Lux knob setting

Lux value is adjustable from approx. 10Lux to 2000Lux.
Set Lux knob at the position of 10Lux, detector can work at dark status only.
Set Lux knob at the position of 2000Lux, detector can be triggered almost at any light level.

4.1.2 Time knob setting

Time: Adjustable from 5secs to 20mins.
Test : walk test operation (2secs on / 2secs off).
⎍ : Short impulse for staircase timer switch control (1sec on, 9secs off).

4.2 Test mode (Uncontrolled by Lux)

4.2.1 LED function & reaction

The red LED of SAE-UE-MS-CSAWE is behind the lens (See FIG.21) for test mode indication. In walk test, LED will turn on for 2secs once the detector is triggered. If detector is continuously triggered, the red LED will require an interval time of 2secs to turn on again. With the above said LED function, the load doesn't need to be connected while conducting walk test.
2 LED functions is an indicator only in warming up period and test mode.

FIG.21

4.2.2 Walk test

The purpose of conducting walk test is to check and adjust detection coverage. Set Time knob to "Test", then conduct a walk test. Lux control is disabled during the walk test.

NOTE

It takes approx. 60secs for detector to warm up after power is supplied for the first time or re-supplied after shut off, then enters into normal operation mode to carry out a walk test.

FIG.22

Test procedure

1.Tester must be within the detector coverage.
2.Switch power on.
3.Detector takes approx. 60secs to warm up with load and LED on, then turn off after warm up time.
4.Walk from outside across to the detection pattern until LED turns on for approx. 2secs indicating the movement has been detected (See FIG.22).
5.Repeat step 4 to conduct walk test until the detection pattern meets user's demands.

4.3 Usage of Lens Shield

4.3.1 SAE-UE-MS-CSAWE has provided 2 lens shields for masking the undesired detection area. Each lens shield has 2 layers, each layer includes 6 small pieces shield and each small piece shield can cover 30º detection area. For example, to install the detector at the height of 2.5m, the detection range can reach up to 1m diameter if the complete lens shields has been used; and up to 3m diameter if only the A layer of lens shield has been used (See FIG.23-A & FIG.23-B).

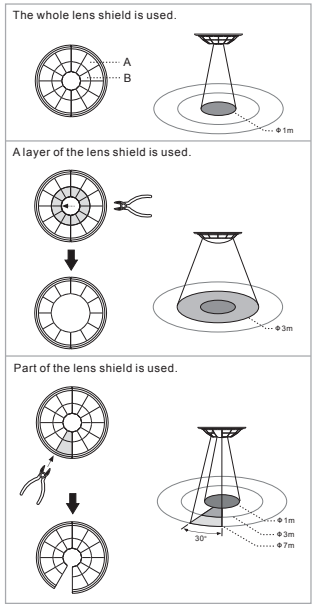


FIG.23-A

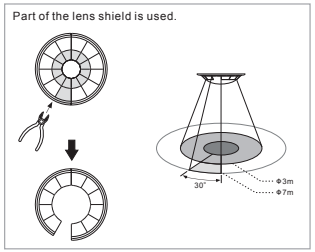


FIG.23-B

4.3.2 After user choosing the desired detection area, the redundant lens shield should be eliminated.
4.3.3 Fixing lens shield: There is a circular groove on the back of the decorative frame and the lens shield is designed with a circular hook. The lens shield can be fitted by inserting the hook of lens shield into its correspondent groove on the decorative frame (See FIG.24 & FIG.25).

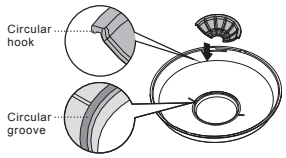


FIG.24

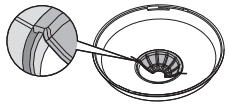


FIG.25

5 TROUBLE SHOOTING

When SAE-UE-MS-CSAWE works abnormally, please check assumptive problems and suggested solutions in following table that will hopefully to solve your problems.

PROBLEM	POSSIBLE CAUSE	SUGGESTED SOLUTION
Lighting device does not turn on	1.Power does not turn on. 2.Wired incorrectly. 3.The ambient light level is too high. 4.Malfunctioned load.	1.Switch on the power. 2.Refer to wiring diagrams (FIG.5 - FIG.7) and check if the load is malfunctioned. 3.Set Lux value above the ambient light level then trigger the detector and check the load is switched on or not. 4.Replace the disabled load with a new one.
Lighting device does not turn off	1.Auto off time is set too long. 2. Detector is nuisance triggered. 3. Wired incorrectly.	1.Set auto off time to a shorter time and check the load is switched off or not according to the pre-set off time. 2.Keep away from detection coverage to avoid activating detector while doing the test. 3.Make sure load and wires are connected correctly.
LED does not turn on	1.Time knob is not set to "Test". 2.No power supplied. 3.Wired incorrectly.	1.Set Time knob to "Test", LED acts as an indicator only in warming up period and test mode. 2.Switch on the power. 3.Refer to wiring diagrams (FIG.5 - FIG.7).
Nuisance triggering	There are heat sources, highly reflective objects or any objects which may be swayed in the wind within the detection coverage.	Avoid aiming the detector toward any heat sources, such as air conditioners, electric fans, heaters or any highly reflective surfaces. Make sure there are no swaying objects within the detection coverage.